Remarks

Claims 1-7, 9, 19, 20 and 23 are pending. Claims 2, 8, 10-18, 21, 22, and 24-46 are cancelled. Applicants reserve the right to pursue the subject matter of the cancelled claims in one or more related applications. Claim 1 has been amended solely to advance prosecution. Support for this amendment can be found at least on page 18, line 25 of the specification and in original claim 2. The language of claim 3 has also been changed slightly. No new matter is introduced by these amendments. After entry of this Amendment, **claims 1, 3-7, 9, 19, 20 and 23 are pending in this application**. Consideration of the pending claims is requested.

Information Disclosure Statement:

Applicants thank Examiner Saoud for acknowledging the Information Disclosure Statements (IDS) filed on July 13, 2006, and July 1, 2005. Applicants note that the entry for PCT/WIPO publication WO 00/69900 on page 1 of the IDS filed on July 13, 2006 was not initialed, and respectfully request that Examiner Saoud initial this reference and return a signed copy for Applicant's file.

Objections to the Specification

The title is objected to because allegedly it is not descriptive. The specification has been amended to include a substitute title.

Claim Rejections under 35 U.S.C. §112, first paragraph:

Claims 1-7, 9, 19-20, and 23 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. The Office action alleges that the claims are defined only by sequence identity (90% sequence identity with SEQ ID NO: 4) and a wished-for activity (retention of angiogenic activity).

Applicants note that the Written Description Guidelines state that, for each claim drawn to a genus, "the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics." It is accordingly

clear that an actual reduction to practice of **each and every** species within a claimed genus is not a requirement of the Guidelines. This is made explicitly clear in the materials which accompanied the Guidelines, responding to comments received in response to the draft Guidelines, wherein it is stated (with emphasis added) that "The Guidelines have been clarified to state that *describing an actual reduction to practice is one of a number of ways to show possession of the invention*. Description of an actual reduction to practice offers an important 'safe haven' that applies to all applications and is *just one of several ways by which an applicant may demonstrate possession of the claimed invention.*"

Further, Applicants note that Example 18 in the Training Materials that accompany the Guidelines is illustrative of the fact that, where there is an actual reduction to practice of even a single embodiment, a claim which encompasses a relevant genus may nevertheless be fully supported and adequately described. The fact that not every species within a genus needs to be enumerated is further emphasized in MPEP 2163(II)(A)(3)(a)(ii), which states that "Description of a representative number of species does not require the description to be of such specificity that it would provide individual support for each species that the genus embraces." Applicants' specification contains an explicit description of a representative number of species, and it is clearly not required that Applicants provide "individual support for each species" in the genus.

As discussed in greater detail below, claim 1 complies with the written description requirement because, (a) since SEQ ID NO: 4 (PAMP) is only 20 amino acids long, sequences having 90% sequence identity with SEQ ID NO: 4 (PAMP) can have no more than two amino acid substitutions; (b) the specification provides adequate teaching regarding where such substitutions can be made because it teaches that the C-terminal arginine of SEQ ID NO: 4 (PAMP) cannot be altered without affecting biological function; and (c) the specification provides specific examples of several assays useful for assessing the biological function of variants of SEQ ID NO: 4 (PAMP). However, solely to advance prosecution, Applicants have amended claim 1 to be directed to methods of using compositions having 95% sequence identity with SEQ ID NO: 4 (PAMP) and that retain angiogenic activity. Applicants respectfully submit that the claims as amended also are supported by the written description of the specification.

Applicants note that any sequence having 95% identity with SEQ ID NO: 4 (PAMP) would differ by only one amino acid residue. Further, the specification teaches that "PAMP is an arginine amide-modified peptide[;]…[as] such, it is very resistant to carboxy peptidase, and the arginine amide modification conveys receptor recognition" (see, page 48, lines 5-6 of the specification). Applicants also submit herewith a Declaration under 37 CFR 1.132 of Frank Cuttitta, Ph.D., which states that, in view of at least the 1993 publication "Peptide Amidation: Signature of Bioactivity," (Cuttitta (1993) *Anat Rec.* 236(1):87-93, 172-3), and the teaching of the specification, one of skill in the art would have known at the time of filing that modification of the C-terminal arginine residue in SEQ ID NO: 4 (PAMP) would interfere with PAMP's bioactivity. Thus, in view of both the teaching in the specification and the general state of the art at the time of filing, one of skill in the art would have known that a sequence having 95% identity to SEQ ID NO: 4 (PAMP) could differ from SEQ ID NO: 4 (PAMP) by only a single amino acid, and that this substitution could occur at only amino acids 2-20 of the SEQ ID NO: 4 (PAMP) sequence.

Furthermore, the specification provides several examples of angiogenesis assays that can be used to determine whether any sequence having 95% identity with SEQ ID NO: 4 (PAMP) retains angiogenic activity. For instance, the corneal pocket assay is described on page 29, lines 25-35, the intradermal sponge angiogenesis assay is described on page 30, lines 1-12, the chick chorioallantoic membrane (CAM) assay is described on page 30, lines 14-28, an the directed *in vivo* angiogenesis assay (DIVAA) is described on page 30, line 30 through page 31, line 7. Therefore, the specification provides sufficient relevant, identifying characteristics of the members of the genus of peptides having 95% sequence identity with SEQ ID NO: 4 that retain angiogenic activity, and the specification satisfies the requirements under 35 U.S.C. §112, first paragraph.

Finally, Applicants do not believe that the Examiner has established a *prima facie* case as required by MPEP 2163(III)(A), by providing reasons why a skilled person would not recognize that the Applicants had possession of the invention. At most, the Examiner has provided general allegations of unpredictability, which is not sufficient – as stated explicitly in MPEP 2163.04(I).

Absent a prima facie case, the Examiner has not met the burden in this case to make a rejection of these claims for alleged failure of written description.

Claim 3 is specific to SEQ ID NO: 4. Page 5 of the Office action notes that a peptide comprising this amino acid sequence meets the description provision of 35 U.S.C. § 112. Claim 3 is therefore allowable.

For all of these reasons, Applicants request that this rejection of pending claims 1, 3-7, 9, 19, 20, and 23 be withdrawn.

Conclusion

It is respectfully submitted that the present claims are in a condition for allowance. If any issues remain, the Examiner is requested to contact the undersigned attorney prior to issuance of the next Office action in order to arrange a telephone interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution and allowance of the claims.

Respectfully submitted,

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